

Docket No.: 10017911-1-3-Streeter (1509-240A)

PATENTREMARKS

The indication on page 5, item 8 of claims 14, 16-18 and 20-23 being allowed is noted. Further, applicants note that claim 24 contains allowable subject matter. The objection to claim 20 is cured by the present amendment, entry of which is in order because it is responsive to an objection to the claims and obviously does not affect substantive issues.

The rejection of claims 1, 3, 7-11, 25 and 26 as being anticipated by Love, USP 5,068,553, is traversed. Claim 1, upon which claims 3, 7-11, 25 and 26 depend, either directly or indirectly, distinguishes over Love by requiring (1) the first power supply terminal to be connected for supplying current to the source drain path of the "other" of said transistors while the source drain path of the "other" of said transistors is on, (2) the capacitor to be a field effect device having a conductivity type opposite to the conductivity type of said "one" of said transistors, and (3) the capacitor to be connected across the gate electrode said "one" of said transistors and the first power supply terminal. This language means that if the "one" transistor of the claim is the PFET transistor of the claim, the conductivity type of the transistor that forms the capacitor is an NFET; if the one transistor of the claim is an NFET the transistor that forms the capacitor is a PFET.

The Office Action does not appear to properly interpret the words "one" and "other." The word "one" can refer to either the PFET or NFET set forth in line 4. If the word "one" refers to the PFET mentioned in line 4, the word "other" refers to the NFET in line 4. In contrast, if the word "one" is interpreted as the NFET set forth in line 4, the word "other" refers to the PFET of claim 4. This interpretation is necessary because of the use in claim 1 of the clauses "the gate electrode of one of said transistors" and "the other of said transistors."

In Love, the grounded power supply terminal supplies current to NFET 88 while NFET 88 is on and V_{DD} supplies current to PFET 86 while PFET 86 is on. MOSFET capacitor 80 (correctly identified in the Office Action as an NFET) is connected between the gates of PFET 86 and NFET 88 and ground.

If ground of Love is considered to be the first power supply terminal of applicants' claim 1, the "other" transistor of claim 1 must be considered as NFET 88 of Love. However, NFET 88 of Love has the same conductivity type as NFET 80 of Love that forms the capacitor between the gate of NFET 88 and ground. Hence, the interpretation of Love in this paragraph is not consistent with claim 1.

Docket No.: 10017911-1-3-Streeter (1509-240A)

PATENT

If V_{DD} of Love is considered the first power supply terminal of applicants' claim 1, the "other" of said transistors of claim 1 must be considered as PFET 86 of Love. While PFET 86 of Love has a conductivity type opposite to that of NFET 80 that forms a capacitor, NFET 80 is not connected between the gate of PFET 86 and the first power supply terminal, V_{DD} . Instead NFET 80 is connected between the gate of PFET 86 and ground, that is opposite from the first power supply terminal V_{DD} . As a result, the interpretation of Love in this paragraph is also inconsistent with claim 1.

Consequently, Love does not anticipate the connections of claim 1.

Applicants also can not agree with the statement in the Office Action that the Figure 3 circuit of Love is such that the pulse shaping circuit including PFET 68, NFET 70 and resistive element 72 necessarily prevents both source-drain paths of PFET 86 and NFET 88 from being on simultaneously. As noted in paragraphs 4 and 5 of the "Background Art" portion of the present application, a problem of prior art drivers including first and second opposite conductivity type transistors, such as PFET 86 and NFET 88 of Love, is that both transistors have a tendency to be on simultaneously during switching between first and second levels of an input source. Since the Examiner is apparently relying on inherency for this feature, he must prove that the Love circuit necessarily causes PFET 86 and NFET 88 to be such that the source drain paths thereof are prevented from being on simultaneously.

The fact that a certain result or characteristic *may* occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. *In re Rijckaert*, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993); *In re Oelrich*, 666 F.2d 578, 581-82, 212 U.S.P.Q. 323, 326 (C.C.P.A. 1981). To establish inherency, extrinsic evidence must make clear that the missing descriptive matter is *necessarily* present in the thing described in the reference and that it would be so recognized by persons of ordinary skill in the art. Inherency may not be established by possibilities or probabilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient. *In re Roberston*, 169 F.3d 743, 745, 49 U.S.P.Q.2d 1949, 1950-51 (Fed. Cir. 1999). In relying upon a theory of inherency, the Examiner must provide a basis in fact or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the prior art. *Ex parte Levy*, 17 U.S.P.Q.2d 1461, 1464 (B.P.A.I. 1990). Since the Examiner has not provided a rationale or evidence to show that Love inherently prevents the source drain paths of PFET 86

Docket No.: 1001791,1-1-3-Streeter (1509-240A)

PATENT

and MFET 88 from being on simultaneously, the rejection of claims 1, 3, 7-11 and 25-26 based on Love is incorrect and must be withdrawn.

The Hamasaki et al. reference, relied on by the Examiner for the rejection of claims 1, 3, 7-12 and 25, appears to indicate that PFET 86 and NFET 88 of Love can both be on at the same time. Hamasaki et al. includes separate low pass filter circuits for preventing an NFET and PFET of a driver from being on simultaneously. In contrast, the gate voltages of PFET 86 and NFET 88 of Love are driven by a single low pass filter including MOSFET 80 that is connected as a capacitor. Hence, Hamasaki et al. also appears to refute the inherency position set forth in the Office Action.

The penultimate sentence of the first paragraph on page 3 of the Office Action discusses claim 20. However, item 8 on page 5 of the Office Action indicates claim 20 is allowed. The last paragraph on page 2 of the Office Action which discusses the claims that are rejected on Love, fails to mention claim 20. In addition, the Office Action Summary does not indicate claim 20 is rejected, but indicates there is an objection to claim 20. Consequently, applicants do not understand the comment about claim 20 on page 3 of the Office Action. Explanation is requested.

The last sentence of the first paragraph on page 3 of the Office Action includes a statement that "because the structure of the claims are (sic) "fully met" so all the functional limitations of the claims are also met (MPEP 2114; In re Swinehart, 169 USPQ 226 (CCPA 1971); and In re Schreiber, 44 USPQ2d 1429 (Fed. Cir. 1997))." The Office Action does not indicate and applicants are unable to ascertain what this statement refers to in the claims rejected as being anticipated by Love. In any event, applicants can not agree with the statement. The Swinehart decision is completely inapposite. In Swinehart, the court overruled the Patent and Trademark Office rejection based on 35 USC 112, paragraph 2. The PTO ruled the claim was vague and indefinite because of functionality. The claim considered by the Court in Swinehart included, as its novel feature, the functional requirement for a material to have certain optical characteristics. The optical characteristics were the sole distinguishing feature of the claim over the art of record. The court ruled the claim complied with 35 USC 112, paragraph 2, and that the functional language must be considered. The Schreiber case was concerned with a popcorn device that apparently had the same configuration as a prior art oil dispenser. The Court ruled it was inherent that the oil dispenser had the same shape as the popcorn device and the popcorn

Docket No.: 10017911-1-3-Streeter (1509-240A)

PATENT

limitations could be ignored because the claim did not adequately recite a structure that differed from the oil dispenser. There is no statement in either of these decisions to support the position set forth in the Office Action that because the structure of a claim is fully met all the functional limitations of the claims are also met. In the opinion of applicants, the Statement in MPEP 2114 that "Apparatus claims must be structurally distinguishable from the prior art" does not properly consider the situation of functional statements in an apparatus claim and is overbroad. As stated in MPEP 2173.05(g):

"A functional limitation must be evaluated and considered, just like any other limitation of the claim, for what it fairly conveys to a person of ordinary skill in the pertinent art in the context in which it is used. A functional limitation is often used in association with an element, ingredient, or step of a process to define a particular capability or purpose that is served by the recited element, ingredient or step."

Also see *In re Venezia*, 530 F.2d 956, 189 U.S.P.Q. 149 (CCPA 1976). If the Examiner adheres to this position, he is requested to indicate how it is applicable to the claims rejected on Love and to provide an analysis to support the statement.

Claims 3, 7, 11, 25 and 26, being dependent on claim 1, are allowable therewith.

Applicants traverse the rejection of claims 1, 3, 7-12 and 25 as being obvious as a result of Hamasaki et al., USP 5,694,065, in view of Rapp, USP 5,280,420. The Office Action seems to rely upon Rapp merely for the disclosure of a field effect transistor that can be operated as a capacitor. Applicants, however, take exception with the position that it would have been obvious to one of ordinary skill in the art to have replaced capacitor C_n of Hamasaki et al. with a field effect transistor device. The capacitor illustrated in Figures 4 and 5 of Hamasaki et al. includes metal electrodes and a dielectric. The Office Action states that such a modification would have been obvious "for the purpose of more efficiently implementation (sic) in silicon (i.e., easily integrated by connecting the source and drain of the n-MOS together) and therefore the operation of the circuitry would be more efficiency (sic) since the circuit is fully integrated." In reply, applicants submit the Declaration of Kenneth Koch, II, who is considered by his employer, Hewlett-Packard Company, to be an expert in the field of electronic circuitry. Mr. Koch has testified, under penalty of perjury, that there are numerous disadvantages associated with replacing the capacitor illustrated in Figures 4 and 5 of Hamasaki et al. with a field effect device. Because of these numerous disadvantages, one of ordinary skill in the art would not have made the substitution which the Office Action alleges would result in more efficient operation. Mr.

Docket No.: 10017911-1-3-Streeter (1509-240A)

PATENT

Koch states that substituting a field effect device for the capacitor of Figures 4 and 5 of Hamasaki et al. would result in less efficient operation. Mr. Koch has testified that the field effect transistor was selected for use in his circuit because of the switching capabilities of such a component. Because the allegations for obviousness are not well founded and are refuted by the testimony of Mr. Koch, the basis for the obviousness of the substitution is not well founded and results from hindsight.

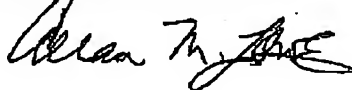
In view of the foregoing amendment and the remarks, allowance is in order.

The Examiner is invited to telephone the undersigned to facilitate advancement of the present application.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 08-2025 and please credit any excess fees to such deposit account.

Respectfully submitted,

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